STATEMENT OF WORK
Peer Reviewer
Peer Review for SFWMD Technical Publication entitled:

"Incorporation of Climatic Indicators in SFWMD Planning and Operations"

Project Manager: Jayantha Obeysekera

Background

Climate in any region is the result of the superposition of both short-term and long-term natural variations and the feedback of many anthropogenic effects. Reasons for climate change and variability are not completely understood and therefore there are significant uncertainties associated with the forecasting of future climate change and variability. The South Florida Water Management District (SFWMD or District) has been interested in possible effects of long term climatic variations on the water resources of South Florida for many years. Significant research and planning has been done over the past decade or more to address these issues. With the initiation of long range planning efforts (50 years or more), such as the Comprehensive Everglades Restoration Plan (CERP), it was essential for the District to consider possible future changes that may occur in climate, and to develop strategies that deal with such changes in the design, planning, regulation, and operation of the District's complex water management system. In view of the recent interest on implications of climate variability and change, this paper is written to identify and assess the potential impacts of natural variability in climate conditions and how SFWMD has addressed uncertain predictions of climate forecasts in both operations and planning of future changes to infrastructure. In view of the recent documents and statements by stakeholder groups regarding the adequacy of models to incorporate possible long term cyclic changes in climate due to such indicators as Atlantic Multi-Decadal Oscillations (AMO), it is important to have an expert peer review of the efforts by SFWMD to address climate variability in modeling. The goal of the peer review is to validate the approach used by SFWMD in modeling and if necessary, seek guidance to improve current approach used for handling uncertain climate outlooks.

Objective of the White Paper

The Technical Publication's objective is to describe the way climatic indicators are used in modeling for planning and operations of the District.

Objectives for the Peer Review

The Reviewer shall read the paper and answer the following questions. Additional comments are welcome, using the form provided in Appendix A:

1. Has the District adequately addressed the long-term wet and dry cycles in modeling for a) facility planning, and b) operational planning. If not, what standard engineering practices can the District modelers follow to address climate variability due to indicators such as AMO.

2. Is there compelling evidence that the volume of inflows to Lake Okeechobee will be as much as double during a wetter cycle as they were in the dry cycle? In the current modeling efforts, has the District adequately addressed the variability of inflows into Lake Okeechobee?
3. Does the modeling approach used by the District for both CERP and WSE schedule design meet requirements of standard engineering and design practices. If not, what additional steps should the District take to improve modeling for these applied purposes?
4. Are the steps being taken in the adaptive management/modeling approach used by the District adequate to address the uncertainties in climate predictions and to assimilate new information?
5. Except for basic research approaches, are there other facility planning options that the District should consider to address the possibility of a continued wetter cycle?
6. Are the data and models used by the District appropriate (reasonable and adequate) for their intended applications?

Scope of Work

This scope of work is for each Reviewer to review the methodology described in the technical publication, and answer the questions listed above. The Reviewer will provide review comments and recommendations in writing, to both the Project Manager and the Editor.

Work Breakdown Details

Task 1*. *Reviewer's Report on the White Paper

Reviewer will review the technical publication titled "Incorporation of Climatic Indicators in SFWMD Planning and Operations", and will answer the questions listed above. The Reviewer may also wish to provide additional comments and suggestions using the form provided in Appendix A.

> **Deliverable:** A Review Report shall be submitted by each Reviewer to the Project Manager and the Editor. The deliverable shall be in electronic format (MS WORD document), using the format provided in Appendix A.
>
> **Date Due**: The Review Report shall be submitted 20 working days after receipt of the technical publication.

Evaluation Criteria for Acceptance of Deliverables

Task 1. The delivered Review Report should reflect careful and objective professional review, observations, conclusions, and recommendations related to the technical publication. The narrative should explicitly answer the questions listed above.

Summary of Time Line, Responsibilities

Task	Description	Responsible Party	Date Due
1	Reviewer provides a Review Report that answers specific questions, along with other comments and suggestions for improvement of the technical publication.	Reviewer	A review report shall be provided 20 working days after receipt of the technical publication.

Appendix A
Reviewer Review Report Format

Technical Publication: Incorporation of Climatic Indicators in SFWMD Planning and Operations

Document size (pages):_____ Due date:___3 July 2006 _____

Reviewer section

Reviewer's name_____

Total pages reviewed: _____ Total review time:_____

1. Has the District adequately addressed the long-term wet and dry cycles in modeling for a) facility planning, and b) operational planning. If not, what standard engineering practices can the District modelers follow to address climate variability due to indicators such as AMO.

2. Is there compelling evidence that the volume of inflows to Lake Okeechobee will be as much as double during a wetter cycle as they were in the dry cycle? In the current modeling efforts, has the District adequately addressed the variability of inflows into Lake Okeechobee?

3. Does the modeling approach used by the District for both CERP and WSE schedule design meet requirements of standard engineering and design practices. If not, what additional steps should the District take to improve modeling for these applied purposes?

4. Are the steps being taken in the adaptive management/modeling approach used by the District adequate to address the uncertainties in climate predictions and to assimilate new information?

5. Except for basic research approaches, are there other facility planning options that the District should consider to address the possibility of a continued wetter cycle?

6. Are the data and models used by the District appropriate (reasonable and adequate) for their intended applications?

Please list any issues/concerns which you feel MUST be addressed before this document can be published.

Please list areas of the publication that were NOT covered by your review (e.g., References, meeting journal format requirements, adherence to District standards...)

Please list any typos or minor format issues that must be corrected.

I have read this technical publication and have provided a careful, objective professional review.

Signature _____ Date _____

Reviewer: Return your completed Review Report to the Project Manager and to the Editor.